

### ABSTRACT OF THE DISCLOSURE

A processing apparatus for processing a microelectronic workpiece includes a metrology unit and a control, signal-connected to the metrology unit. The control can modify a process recipe or a process sequence of the processing apparatus based on a feed forward or a feed back signal from the metrology unit. A seed layer deposition tool, a process layer electrochemical deposition tool, and a chemical mechanical polishing tool, arranged for sequential processing of a workpiece, can be controlled as an integrated system using one or more metrology units. A metrology unit can be located at each tool to measure workpiece parameters. Each of the metrology units can be used as a feed forward control and/or a feed back control at each of the tools.